**ARDUINO CODE :**

#include <DHT.h>

#define DHTPIN 2 // DHT11 Data pin connected to D2

#define DHTTYPE DHT11 // Define sensor type

#define BUZZER 3 // Buzzer connected to D3

#define MQ135 A0 // MQ135 Gas sensor connected to A0

DHT dht(DHTPIN, DHTTYPE);

void setup() {

Serial.begin(9600);

pinMode(BUZZER, OUTPUT);

pinMode(MQ135, INPUT);

dht.begin();

}

void loop() {

// Read MQ135 Gas Sensor

int gasLevel = analogRead(MQ135);

// Read DHT11 Sensor

float temperature = dht.readTemperature();

float humidity = dht.readHumidity();

// Check if readings are valid

if (isnan(temperature) || isnan(humidity)) {

Serial.println("Error: DHT11 sensor failure!");

return;

}

// Print formatted data for Python script

Serial.print(gasLevel);

Serial.print(",");

Serial.print(temperature);

Serial.print(",");

Serial.println(humidity);

// 🚨 Disaster Detection Logic

if (gasLevel > 150 || temperature > 50) {

Serial.println("ALERT: High Gas/Temperature!");

digitalWrite(BUZZER, HIGH);

delay(1000);

digitalWrite(BUZZER, LOW);

}

delay(2000);

}

**PYTHON SCRIPT FOR THINGSPEAK :**

import serial

import requests

import time

# ThingSpeak API Key

API\_KEY = "6H4WRQAEYJDALA7T"

# Connect to Arduino on the correct COM port

try:

ser = serial.Serial('COM9', 9600, timeout=2) # Change 'COM9' if needed

print("✅ Connected to COM9")

time.sleep(2) # Wait for connection to stabilize

except Exception as e:

print("❌ Error connecting to Arduino:", e)

exit()

# Read data from Arduino and upload to ThingSpeak

while True:

try:

# Read data from serial port

data = ser.readline().decode().strip()

if data:

print("📡 Received:", data)

values = data.split(",") # Split into gas, temperature, humidity

if len(values) == 3:

gas\_level, temperature, humidity = values

# Send data to ThingSpeak

url = f"https://api.thingspeak.com/update?api\_key={API\_KEY}&field1={gas\_level}&field2={temperature}&field3={humidity}"

response = requests.get(url)

if response.status\_code == 200:

print("✅ Data Uploaded:", gas\_level, temperature, humidity)

else:

print("❌ Failed to upload data:", response.status\_code)

time.sleep(15) # ThingSpeak allows 15 sec interval

except Exception as e:

print("❌ Error:", e)